DNREC-Air Quality Management
156 South State Street
Dover, Delaware 19901
Phone: 302-739-9402
Fax: 302-739-3106

Delaware Department of Natural Resources and Environmental Control

DNREC Seeks Comments on Indian River Power, LLC/NRG Energy, Inc. Air Permit Amendment Applications

DNREC's Division of Air and Waste Management, Air Quality Management Section will conduct a public hearing to receive comments on the air permit applications filed by Indian River Power, LLC Millsboro, to construct air pollution control equipment necessary to comply with state and federal air quality regulations and the Department's Consent Decree for the facility. The Indian River Generating Station is owned by Indian River Power, LLC/NRG Energy, Inc.

The public hearing is scheduled for 6:00 p.m. on August 12, 2009, at the Millsboro Fire Company, 109 E. State Street, Millsboro, Delaware.

The applications are for the installation of two (2) circulating dry scrubbers, two (2) selective catalytic reduction units, one (1) aqueous ammonia storage tank, five (5) lime storage silos with baghouses, and one (1) byproduct storage silo with a baghouse for Generating Units 3 and 4 to control sulfur dioxide and nitrogen oxides emissions at their facility located at 29416 Power Plant Road in Millsboro. A description of the processes and expected reductions is on the back of this fact sheet.

This project will result in significant reduction of acid gas emissions, greater than 80%, as well as estimated decreases in maximum allowable emissions of nitrogen oxide from 12,452 tons to 3,064 tons; sulfur dioxide from 41,720 tons to 6,128 tons; particulate matter from 4,730 tons to 2,298 tons; and ammonia from 372 to 250 tons.

The applications may be inspected at the offices of the Division of Air and Waste Management, 156 S. State Street, Dover, DE 19001 and at 715 Grantham Lane, New Castle, DE 19720. In addition, the applications may be reviewed online and as a hard copy at the Millsboro Public Library located at 217 W. State Street in Millsboro, DE 19966 (phone: (302) 934-8743).

Interested parties may submit comments in writing before the hearing. Statements and testimony may be presented orally or in writing at the hearing. Written statements may be presented prior to the hearing and should be addressed to Tom Lilly or Joanna French at: Air Quality Management Section, Division of Air & Waste Management, 156 S. State Street, Dover, DE 19901. The public comment period will end on August 12, 2009, unless extended by the hearing officer at the public hearing.

Contact Information

For additional information or an appointment to inspect the applications, please call Tom Lilly at (302) 739-9402, or contact Tom by e-mail at: Tom.Lilly@state.de.us. To review the air permit applications, please visit: http://www.awm.delaware.gov/Info/Documents/Indian%20River%204_15_09%20application.pdf

QUESTIONS AND ANSWERS

How will the air pollution reductions be achieved?

In order to control emission limits under Regulation No. 1146, Electric Generating Unit (EGU) Multi-Pollutant Regulation and the Consent Order, the Indian River Generating Station is proposing to construct circulating dry scrubbers with baghouses to control sulfur dioxide (SO_2) and selective catalytic reduction units to control nitrogen oxide (NOx) emissions for both Generating Units 3 and 4. Baghouses are particulate control devices similar to vacuum cleaner bags, but on a much larger scale. The selective catalytic reduction units are catalysts similar to those found on an automobile; they act to lower the temperature at which the reaction between ammonia and nitrogen oxide occurs. The new pollution control equipment will lower the allowable SO_2 emissions to a maximum of 0.2 pounds per million BTUs and NOx emissions to a maximum of 0.1 pounds per million BTUs.

How will the circulating dry scrubbers work?

The circulating dry scrubber process use lime to convert SO2 to calcium sulfite as a solid. The flue gas, or coal combustion exhaust gas, containing SO_2 passes through a vessel containing lime and a chemical reaction occurs that generates calcium sulfite as a solid, and water as a vapor. The flue gas passes through the vessel to the baghouse. The calcium sulfite, along with other particulate matter, is then collected in the baghouse. The flue gas discharges from a stack to outside ambient air under Permit APC-81/0660 and 82/0149. The particulate collected in the baghouse is then conveyed to a byproduct storage silo.

Indian River Generating Station has submitted permit application requests to construct five (5) lime storage silos (63,000; 2,800; 2,800; 7,900; and 7,900 cubic feet) with baghouses. When issued the permit will be Permit: APC-2009/0106-CONSTRUCTION. The estimated controlled particulate emissions from the lime storage silos will be 5.8 tons per year (TPY).

The baghouses for the circulating dry scrubbers also collect particulate matter. Indian River Generating Station has submitted a permit application request to construct one (1) 120,000 cubic foot byproduct storage silo with baghouse. When issued the permit will be Permit: APC-2009/0107-CONSTRUCTION. The estimated controlled particulate emissions from the byproduct storage silo will be 3.2 TPY.

How will the selective catalytic reduction process work?

The selective catalytic reduction process uses aqueous ammonia to convert NOx to nitrogen. An aqueous ammonia is injected into the flue gas. The flue gas containing nitrogen oxides (NO, NO_2) passes through a catalyst bed where a chemical reaction occurs that generates nitrogen and water as gases. The aqueous ammonia is 29% ammonia and 71% water. Indian River Generating Station has submitted a permit application request to construct a 90,000 gallon aqueous ammonia storage system for this. When issued, the permit will be Permit: APC-2009/0105-CONSTRUCTION. The estimated uncontrolled ammonia emissions from the storage tank will be 0.1 TPY.

The exhaust flue gas flow from Generating Units 3 and 4 will be combined through a single stack. When issued, the permit for Unit 3 will be Permit: APC-81/0660-CONSTRUCTION-Amendment 8; and the permit for Unit 4 will be Permit: APC-82/0149-CONSTRUCTION-Amendment 7.